

CLAIMS

What is claimed is:

1. A method for controlling a display on a portable electronic device, the method comprising the computer-implemented acts of:
detecting a motion of said portable electronic device relative to a fixed point;
calculating a position of said portable electronic device based on said motion that is
5 relative to said fixed point;
calculating and analyzing said motion; and
adjusting said display based on said motion and on said position, if said motion corresponds to a user command.
2. The method of Claim 1, wherein said act of detecting said motion further comprising:
10 receiving input from motion sensors which can detect said motion of said portable electronic device.
3. The method of Claim 1, wherein said act of calculating a position is based on a Javal coordinate system.
4. The method of Claim 1, wherein said act of calculating and analyzing said motion is
15 based on a Javal arc coordinate system.
5. The method of Claim 1, wherein said act of calculating and analyzing said motion further comprises measuring changes in a magnetic field.
6. The method of Claim 1, wherein said act of calculating and analyzing said motion further comprises measuring one or more angles corresponding to a position of said
20 portable electronic device relative to said fixed point.
7. The method of Claim 1, wherein said motion is modeled mathematically by a virtual surface of a virtual thin-walled shell that is approximately spherical in shape.

8. The method of Claim 4, wherein an origin of said Javal arc is said fixed point.

9. A controller for a display on a portable electronic device, the controller comprising:
at least one accelerometer for measuring a motion of said portable electronic device;
at least one magnetic sensor for measuring said motion; and

5 logic for calculating said motion and for calculating a position of said portable
electronic device based on one or more measurements from said at least one
accelerometer and said at least one magnetic sensor.

10. The controller of Claim 9, wherein said motion is modeled by a pre-defined path.

11. The controller of Claim 9, wherein said motion is modeled by a Javal arc.

10 12. The controller of Claim 9, wherein said motion is based on a Javal coordinate system.

13. A method for controlling a device, the method comprising the computer-implemented
acts of:

calculating and analyzing a motion of said device relative to a fixed point from said
device; and

15 adjusting at least one aspect of said device based on said motion when one or more
criteria are met.

14. The method of Claim 13, wherein said acts of calculating and analyzing said motion
further comprising:

receiving input from motion sensors which can detect said motion of said device.

20 15. The method of Claim 14, wherein said motion sensors are attached to said device.

16. The method of Claim 13, further comprising:

calculating a position of said device based on said motion that is relative to said fixed
point.

17. A controller for a display on a portable electronic device, the controller comprising:
two accelerometers for measuring a motion of said portable electronic device;
at least one magnetic sensor for measuring said motion; and
logic for calculating said motion and for calculating a position of said portable
5 electronic device based on one or more measurements from said two
accelerometers and said at least one magnetic sensor.

18. A controller for a display on a portable electronic device, the controller comprising:
one gyroscope for measuring a motion of said portable electronic device;
at least one magnetic sensor for measuring said motion; and
10 logic for calculating said motion and for calculating a position of said portable
electronic device based on one or more measurements from said one
gyroscope and said at least one magnetic sensor.

19. A controller for a display on a portable electronic device, the controller comprising:
one accelerometer for measuring a motion of said portable electronic device;
15 two magnetic sensors for measuring said motion; and
logic for calculating said motion and for calculating a position of said portable
electronic device based on one or more measurements from said one
accelerometer and said two magnetic sensors.